BTI

Light commercial atmospheric water heater

BTI - 65/85/100

Atmospheric water heater, primarily intended for light commercial / industrial applications • Control, high limit and energy cut-off thermostats to ensure safe operation • Safety sensor to prevent flue spillage • Stainless-steel burner for natural or LP gas • Waterway access cover for comprehensive waterside tank maintenance • Replaceable magnesium anode • Fully automatic spark ignition to minimise standing losses • General fault indicator light • Optional ancillaries: Unvented kits • Destratification pump kit • Powered anode • Time clock kit • Flue fan kit • Time clock kit/7 day timer to minimise standing losses

Innovation has a name.

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Technical specifications

		BTI 65	BTI 85	BTI 100
Gas data natural gas 2H (G20)				
Input*	kW	18.1	23.1	27.4
Output	kW	12.7	16.2	19.2
Inlet pressure	mbar	20	20	20
Burner pressure	mbar	12	11,5	10
Gas consumption**	m^3/h	1.7	2,2	2.6
Diameter pilot orifice	mm	0.56/0.41	0.56/0.41	0.56/0.41
Diameter main orifice	mm	3.4	3,9	4.5
Max. flue gas temperature	°C	265	275	275
Flue gas discharge	kg/h	27	55.2	53.2
Gas data butane 3+ (G30)				
Input*	kW	17.2	21.8	29.6
Output	kW	12.3	15.7	21.2
Inlet pressure	mbar	30	30	30
Burner pressure	mbar	-	-	-
Gas consumption**	kg/h	1.3	1.6	2.2
Diameter pilot orifice	mm	0.23	0.23	0.23
Diameter main orifice	mm	1.9	2.2	2.5
Max. flue gas temperature	°C	265	275	275
Flue gas discharge	kg/h	-	81.1	74.8
Gas data propane 3+ (G31)				
Input*	kW	16.4	20.9	28.6
Output	kW	11.7	15	20.4
Inlet pressure	mbar	37	37	37
Burner pressure	mbar	-	-	-
Gas consumption**	kg/h	1.2	1,5	2,0
Diameter pilot orifice	mm	0.23	0.23	0.23
Diameter main orifice	mm	1.9	2.2	2.5
Max. flue gas temperature	°C	265	275	275
Draw-off capacity				
Storage capacity	l	178	265	355
Max. temperature setting	°C	80	80	80
30 min. ΔT=44°C	l	281	396	508
60 min. ΔT=44°C	l	405	554	713
90 min. ΔT=44°C	l	529	713	871
120 min. ΔT=44°C	l	652	871	1070
Continuous ΔT=44°C	l/h	247	375	399
Heating-up time ΔT=44°C	min.	43	42	53
30 min. ΔT=50°C	l	248	348	447
60 min. ΔT=50°C	l	356	488	612
90 min. ΔT=50°C	l	465	627	777
120 min. ΔT=50°C	l	574	767	992
Continuous ΔT=50°C	l/h	218	330	351
Heating-up time ΔT=50°C	min.	49	48	61
30 min. ΔT=55°C	l	225	317	406
60 min. ΔT=55°C	l	324	443	556
90 min. ΔT=55°C	l	423	570	706
120 min. ΔT=55°C	l	522	697	856
Continuous ΔT=55°C	l/h	198	300	319
Heating-up time ΔT=55°C	min.	54	53	67
Electrical data				
Power consumption	W		30	
Power supply	VAC/Hz		230(-15/+10%) / 50	
General				
Anodes	-		1	
Maximum working pressure	bar		8	
Maximum weight	kg	266	382	499
Shipping data				
Weight empty	kg	93	122	149
Weight incl. packaging BTT / BTI	kg	105	140	167
Width packaging	mm	670	780	780
Height packaging	mm	1690	1640	1830
Depth packaging	mm	730	870	870

* Gas data on gross value
** Gas consumption at 15°C and 1013.25 mbar

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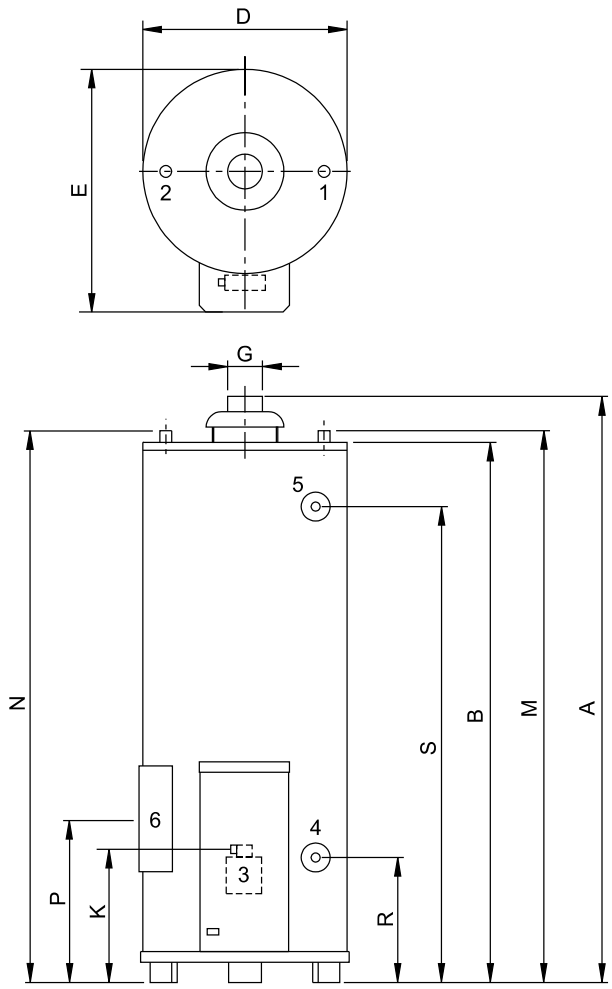
Dimensions



	BTI 65	BTI 85	BTI 100
A	1680	1585	1780
B	1510	1450	1640
D	520	645	675
E	655	770	775
G	100	130	130
K	340	340	340
M	1540	1505	1685
N	1540	1505	1685
R	295	285	285
S	1330	1280	1460
1 Cold water (external)	3/4-14 NPT	1-11.5 NPT	1 1/4-11.5 NPT
2 Hot water (external)	3/4-14 NPT	1-11.5 NPT	1 1/4-11.5 NPT
3 Gas control (internal)	Rp 1/2		
4 Tank drain valve (internal)	3/4-14 NPT		
5 T&P valve (internal)	3/4-14 NPT		

Dimensions in mm. All BTI water heaters receive a three years warranty on the tank and one year on parts.

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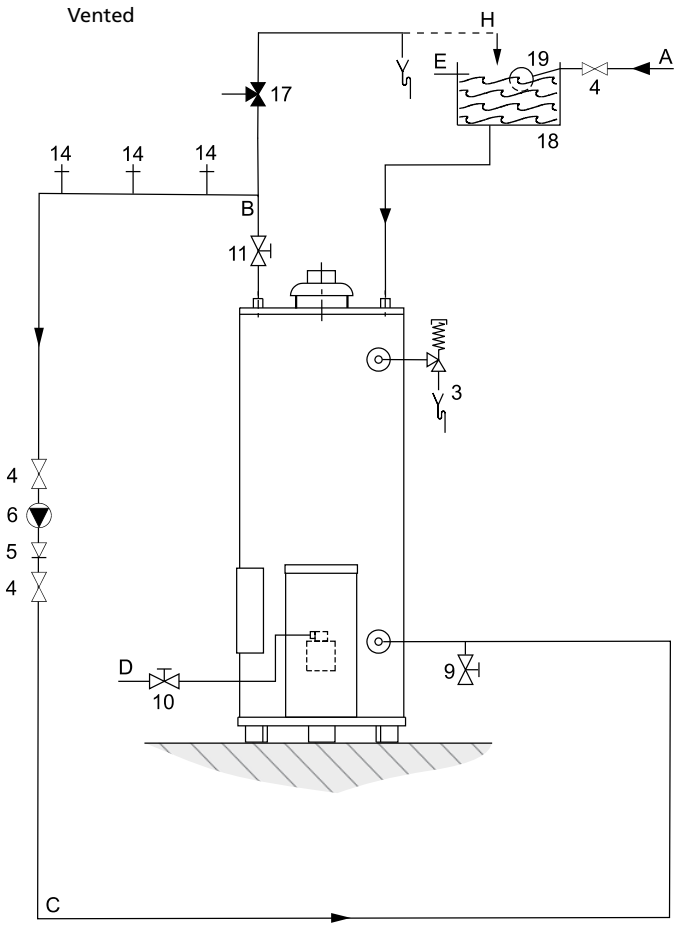
Installation diagram



3 T&P valve
4 Stop valve
5 Non-return valve
6 Circulation pump
9 Drain valve
10 Gas cock
11 Isolating valve
14 Hot water outlets
17 Three way valve
18 Water tank
19 Float valve

A Cold water
B Hot water
C Return circulation
D Gas supply
E Overflow pipe
H Expansion vent pipe

A BTI water heater should be installed in accordance with local standards and ventilation requirements (category B11BS).

Further installation and connection details can be found in the Installation & Commissioning Manual.

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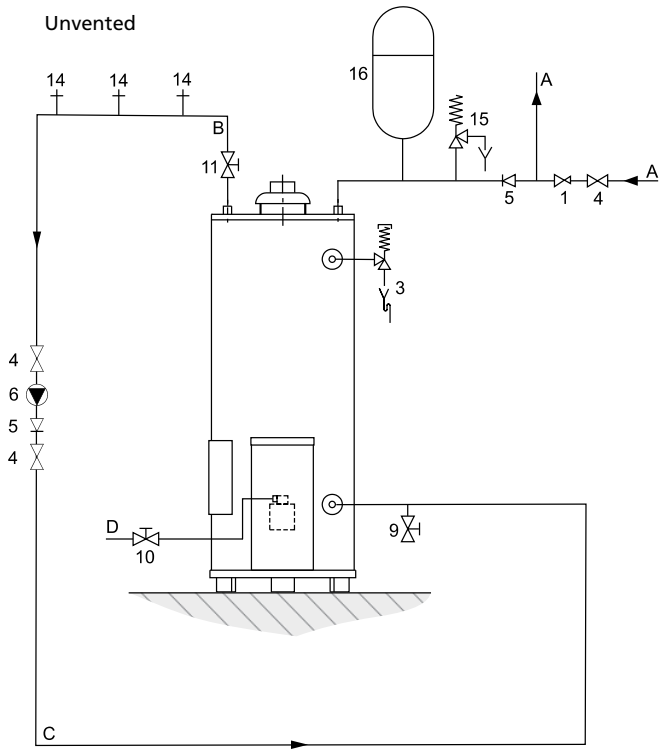
Installation diagram



1 Pressure reducing valve
3 T&P valve
4 Stop valve
5 Non-return valve
6 Circulation pump
9 Drain valve
10 Gas cock
11 Isolating valve
14 Hot water outlets
15 Expansion relief valve
16 Expansion vessel

A Cold water
B Hot water
C Return circulation
D Gas supply

A.O. Smith unvented system kits utilise combination valves.

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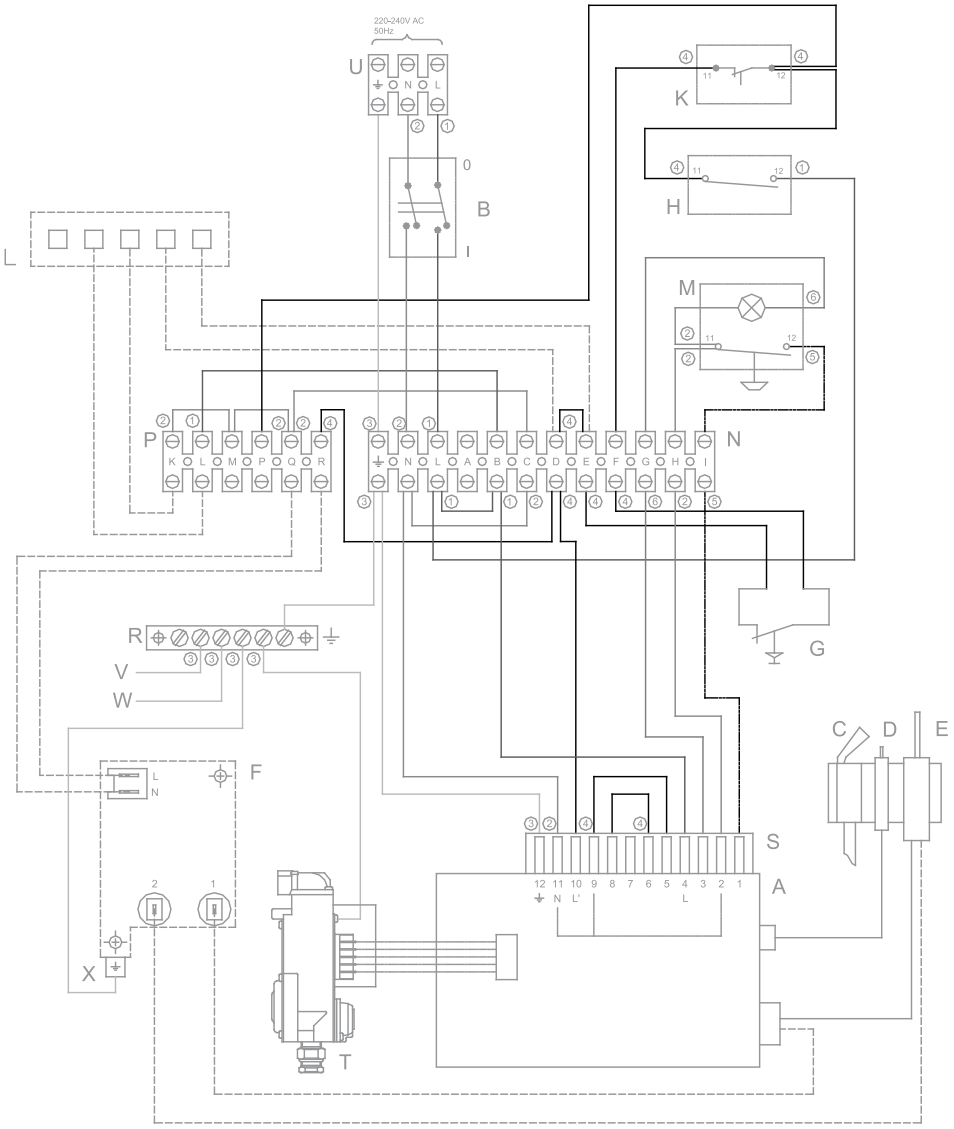
Electrical diagram BTI



A	Ignition controller
B	ON/OFF switch
C	Pilot burner
D	Spark electrode
E	Flame probe
F	Transformer flame detection (optional)
G	Combustion products discharge safety device
H	Control thermostat
K	Safety thermostat
L	Timer (optonal)
M	Remote button
N	Terminal block
P	Terminal block
R	Earth terminals
S	Connector to ignition controller
T	Gas control valve
U	Connection strip
V	Tank earth
W	Casing earth
X	Control panel base plate earth

For the parts numbers of components please refer to the “Maintenance and accessories” chapter.

Colour code cables
① = brown
② = blue
③ = yellow/green
④ = black
⑤ = white
⑥ = red

Explanation line types cabling
———— = Existing
– – – – – = Optional
—·—·—·— = Internal

Data subject to change INT/0808/BTI/01
Terms and conditions apply, please refer to our website.

Mixed Sources
Product group from well-managed forests, controlled sources and recycled wood or fiber
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